		Pushing the Env	relope
		1999 Science	
		Core Curricul	um
New York Science			
Grades 5-8			
Activity/Lesson	State	Standards	
Types of Engines (Determine the speed and acceleration of a
pgs. 11-23)	NY	SCI.5-8.4.P.16	moving object.
Chemistry (pgs. 25-			Determine the identity of an unknown element,
41)	NY	SCI.5-8.4.P.13	using physical and chemical properties.
		Pushing the Env	relope
		1999 Science	
		Core Curricul	um
New York Science			
Grades 5-8			
Activity/Lesson	State	Standards	
Types of Engines (The motion of an object can be described by its
pgs. 11-23)	NY	SCI.5-8.4.P5.1b	position, direction of motion, and speed.
			Force is directly related to an object's mass and
Types of Engines (acceleration. The greater the force, the greater
pgs. 11-23)	NY	SCI.5-8.4.P5.1d	the change in motion.
			The motion of particles helps to explain the
			phases (states) of matter as well as changes
			from one phase to another. The phase in which
Chemistry (pgs. 25-			matter exists depends on the attractive forces
41)	NY	SCI.5-8.4.P3.1c	among its particles.
			The Law of Conservation of Mass states that
			during an ordinary chemical reaction matter
			cannot be created or destroyed. In chemical
Chemistry (pgs. 25-			reactions, the total mass of the reactants equals
41)	NY	SCI.5-8.4.P3.2e	the total mass of the products.
			An object's motion is the result of the combined
			effect of all forces acting on the object. A moving
Discorder 1244 (1			object that is not subjected to a force will
Physics and Math	NIX	001504554	continue to move at a constant speed in a
(pgs. 43-63)	NY	SCI.5-8.4.P5.1c	straight line. An object at rest will remain at rest.
Distraction and BA (I			Force is directly related to an object's mass and
Physics and Math	NIX	001504054	acceleration. The greater the force, the greater
(pgs. 43-63)	NY	SCI.5-8.4.P5.1d	the change in motion.
Physics and Math	NIX	001504054	For every action there is an equal and opposite
(pgs. 43-63)	NY	SCI.5-8.4.P5.1e	reaction.
			An abject a motion is the recult of the combined
			An object's motion is the result of the combined effect of all forces acting on the object. A moving
			object that is not subjected to a force will
Pocket Activity (non			continue to move at a constant speed in a
Rocket Activity (pgs.	NY	SCI 5 9 4 D5 10	straight line. An object at rest will remain at rest.
69-75)	INI	301.3-0.4.63.10	Force is directly related to an object's mass and
Rocket Activity (pgs.			acceleration. The greater the force, the greater
69-75)	NY	SCI 5-8 1 D5 14	the change in motion.
09-10)	[IN I	J3C1.3-0.4.F3.Tu	une change in modon.

Rocket Activity (pgs.			For every action there is an equal and opposite
69-75)	NY	SCI.5-8.4.P5.1e	
	-	Pushing the Env	elope
		1999 Science	
		Core Curriculi	um
New York Science			
Grades 9-12			
Activity/Lesson	State	Standards	
			Learning about the historical development of
			scientific concepts or about individuals who
			have contributed to scientific knowledge
		0010	provides a better understanding of scientific
History of Aviation	N. 13. /	SCI.9-	inquiry and the relationship between science
Propulsion (pgs. 5-9)	NY	12.L.1.1.b	and society.
			According to Newton's First Law, the inertia of
			an object is directly proportional to its mass. An
Types of Engines (SCI.9-	object remains at rest or moves with constant
Types of Engines (NY	12.P.4.5.1.i	velocity, unless acted upon by an unbalanced force.
pgs. 11-23)	INT	12.6.4.3.1.1	According to Newton's First Law, the inertia of
			an object is directly proportional to its mass. An
			object is directly proportional to its mass. An
Physics and Math		SCI.9-	velocity, unless acted upon by an unbalanced
(pgs. 43-63)	NY	12.P.4.5.1.i	force.
Physics and Math	111	SCI.9-	When the net force on a system is zero, the
(pgs. 43-63)	NY	12.P.4.5.1.j	system is in equilibrium.
Physics and Math		SCI.9-	According to Newton's Second Law, an
(pgs. 43-63)	NY	12.P.4.5.1.k	unbalanced force causes a mass to accelerate.
,			According to Newton's Third Law, forces occur
			in action/ reaction pairs. When one object exerts
			a force on a second, the second exerts a force
Physics and Math		SCI.9-	on the first that is equal in magnitude and
(pgs. 43-63)	NY	12.P.4.5.1.q	opposite in direction.
			According to Newton's First Law, the inertia of
			an object is directly proportional to its mass. An
			object remains at rest or moves with constant
Rocket Activity (pgs.		SCI.9-	velocity, unless acted upon by an unbalanced
69-75)	NY	12.P.4.5.1.i	force.
Rocket Activity (pgs.	NIX	SCI.9-	When the net force on a system is zero, the
69-75)	NY	12.P.4.5.1.j	system is in equilibrium.
Rocket Activity (pgs.	NY	SCI.9- 12.P.4.5.1.k	According to Newton's Second Law, an unbalanced force causes a mass to accelerate.
69-75)	INT	12.F.4.3.1.K	According to Newton's Third Law, forces occur
			in action/ reaction pairs. When one object exerts
			a force on a second, the second exerts a force
Rocket Activity (pgs.		SCI.9-	on the first that is equal in magnitude and
69-75)	NY	12.P.4.5.1.q	opposite in direction.
/			ar Francisco
	1	Pushing the Env	elope
		1999 Science	
		Core Curricul	um
New York Science			

Grades 9-12			
Activity/Lesson	State	Standards	
Physics and Math (pgs. 43-63)	NY	SCI.9- 12.4.P.5.1.v	Students can explain and predict different patterns of motion of objects (e.g., linear and uniform circular motion, velocity and acceleration, momentum and inertia). Draw scaled force diagrams using a ruler and a protractor.
Physics and Math (pgs. 43-63)	NY	SCI.9- 12.4.P.5.1.ix	Students can explain and predict different patterns of motion of objects (e.g., linear and uniform circular motion, velocity and acceleration, momentum and inertia). Verify Newton's Second Law for linear motion.
Physics and Math (pgs. 43-63)	NY	SCI.9- 12.4.P.5.1.xi	Students can explain and predict different patterns of motion of objects (e.g., linear and uniform circular motion, velocity and acceleration, momentum and inertia). Verify Newton's Second Law for uniform circular motion.
Rocket Activity (pgs. 69-75)	NY	SCI.9- 12.4.P.5.1.v	Students can explain and predict different patterns of motion of objects (e.g., linear and uniform circular motion, velocity and acceleration, momentum and inertia). Draw scaled force diagrams using a ruler and a protractor.